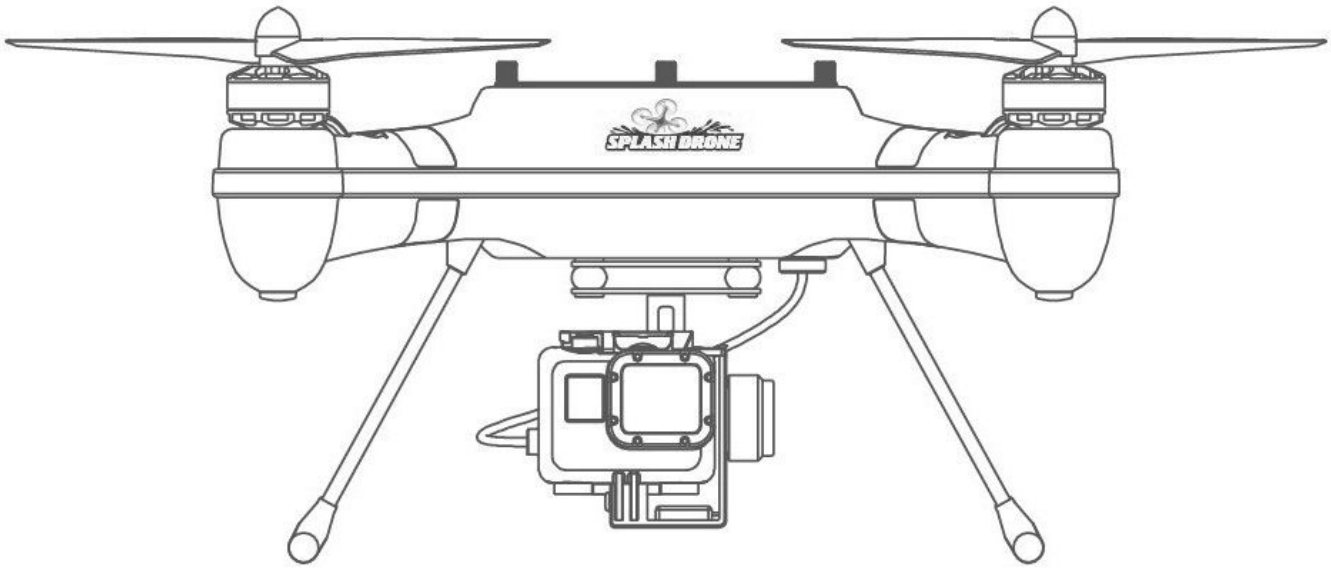
SPLASH DRONE

User Manual V1.0



Disclaimer & Warning

Please read this disclaimer carefully before using Splash Drone. By using this product, you hereby to agree this disclaimer and signify that you have read this manual fully. **This product is not suitable for people who are under age of 18.**

Please obey relevant regulations of the International Civil Aviation Organization, local airspace control law and UAV management rules. Operate only in a safe area**; like an open field, Do not operate close to crowds and populated areas.**

Splash Drone is an excellent flight platform offering an excellent flight experience providing, only if it is powered normally and is in a good working condition. Splash Drone has a built-in GPS system and also efforts have been made to reduce an accidental starting, you need to be mindful of risks when the main power battery is connected. We strongly recommend users to remove all propellers when calibrating and setting parameters to reduce these risks. Make sure all connections are good, and keep children and animals away when conducting , system calibration and parameter setup.

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SwellPRO accepts no liability for damage(s) or injuries incurred directly or indirectly from the use of this product in the following conditions:

1. Damage(s) or injuries incurred when users are drunk, taking drugs, drug anesthesia, dizziness, fatigue, nausea and any other conditions no matter physically or mentally that could impair your ability.

2. Damage(s) or injuries caused by subjective intentional operations.

3. Any mental damage compensation caused by accident.

4. Failure to follow the guidance of the manual to assemble or operate.

5. Before using Splash Drone, please accept some flight training first. (Using a flying simulator software to practice flying, or learning from a professional experienced person who can teach you flight, and etc).

6. Damage(s) or injuries caused by without Calibration before using

7. Malfunctions caused by refit or replacement with non-SwellPRO accessories and parts.

8. Damage(s) or injuries caused by using third party products or fake SwellPRO products.

9. Damage(s) or injuries caused by mis-operation or subjective mis-judgment.

10. Damage(s) or injuries caused by mechanical failures due to erosion, aging.

11. Damage(s) or injuries caused by continued flying after low-voltage protection alert are triggered.

12. Damage(s) or injuries caused by sea water intrusion motor not timely clean the motor with pure water.

13. Damage(s) or injuries caused by subjective remove the Fight Controller in case of lose control.

14. DO NOT use the Splash Drone transmitter (receiver) with the other third party remote control equipment.

15. Damage(s) or injuries caused by knowingly flying the Splash Drone in abnormal condition (such as oil, soil, sand and other unknown material ingress into the Splash Drone or the assembly is not completed, the main components have obvious faults, obvious defect or missing accessories).

16. Damage(s) or injuries caused by flying in the following situations such as the Splash Drone in magnetic interference area, radio interference area, government regulated no-fly zones or the pilot is in backlight, blocked, fuzzy sight, and poor eyesight is not suitable for operating and other conditions not suitable for operating.

17. Damage(s) or injuries caused when the Splash Drone is in the following situations: collision, fire, explosion, floods, tsunamis, subsidence, ice trapped, avalanche, debris flow, landslide, earthquake,

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etc.

18. Damage(s) or injuries caused by infringement such as any data, audio or video material recorded by the use of Splash Drone.

19. Damage(s) or injuries caused by the misuse of the battery, protection circuit, RC model and battery chargers.

20. All parts must be kept out of the reach of children to avoid choke hazard; if a child accidentally swallow sandy part you should immediately seek medical assistance.

21. Other losses that are not covered by the scope of SwellPRO liability.

Symbol Meaning:

Forbidden (Important) Caution (Important)

Simple test methods
Please stop the operation if any exceptional movement occurs.
Turn on the power; please ensure the throttle is in the neutral position every time the transmitter is turned on. When making adjustments to the drone, make sure the engine is turned off otherwise you may unexpectedly lose control and create a dangerous precedent.

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Introduction

Splash drone is first one of amphibious drone in the world that can carry sports Camera with dive cases easily to record your life moments, especially water sport wonderful moment. With the addition of a 2 or 3 Axis gimbal to make aerial filming so easy, this is the perfect photo platform. Enjoy a very real flying experience with the sports camera (FPV Feature). With latest design Payload Release Mechanism carry objects up to 1.0Kg and drop exactly where you want. Splash Drone is not only a flying camera, but also a super strong flying tool for different kinds of applications.

Function Overview

Splash Drone Function Overview
1. Payload release mechanism: Capable of dropping a two-pound payload at the flip of a switch.
2. Waterproof Camera Gimbal: This 2 axis waterproof gimbal allows the pilot to tilt the GoPro camera in the air and loose the fear of landing on water, while getting live video feed back.
3. Splash Drone Dive Case: Gets live video feed directly from the GoPro and into the video transmitter.
4. Emergency LED flare: Can hover a flare light 300 feet in the air for up to 15 minutes. This is a huge improvement on traditional emergency flares that only last about a few seconds in the air.
5. Lifesaver delivery: Splash Drone can delivery an automatically inflating life preserver to a swimmer in trouble in seconds.
6. Integrated video transmitter: Can transmit a clear video signal for up to 2 mile.
7. Return Home: The Splash Drone will automatically return to its take off position if the radio lose contact.
8. Telemetry flight control and remote control system: Telemetry at the palm of your hands showing you its location, altitude, distance and battery status
9. Self-tighten Propeller: Customized make #12” self-tighten carbon fiber propeller included.
10. Smart Balance Charger: Splash Drone Easy Battery Charger, no more complex setting.
11. Follow me mode: Follow the pilot wherever he goes without the need of piloting the drone.
12. App based control: Allow the pilot to fly the Splash Drone with an android device.
13. Autonomous Mission: Allow the pilot to drop waypoints and have the Splash Drone execute a specific flight path.
14. Aluminum Suitcase: Completely self-contained Aluminum Suitcase that is light and easy to carry with custom cut foam to keep everything safe and organized inside.

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What's in box?

Please check the contents of the box before using.

Item	Image	RTF Version	PRO Version	AUTO Version
Splash Drone x1		✔	✔	✔
Self-tighten Prop Pair x2(pair)		✔	✔	✔
4S 4500Mah Lipo battery x1 （build- in）		✔	✔	✔
Mi600 VTX （build-in）			✔	✔
Land Gear x1(pair）		✔	✔	✔
Romote controller x1		✔	✔	✔
Short-circuits cable x1		✔	✔	✔
Groud station				✔

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Waterproof Gimbal x1			✔	✔
Gimbal control board x1			✔	✔
M3 x5 screw		✔	✔	✔
Quick Release x1		✔	✔	✔
Payload Release x1		✔	✔	✔
7’’ FPV Monitor x1			✔	✔
Monitor Antenna x2			✔	✔
Monitor AV cable x1			✔	✔
Monitor Power Cable x1			✔	✔
Monitor Bracket x1			✔	✔

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Charger x1		✔	✔	✔
EU charger cable x1		✔	✔	✔
US charger cable x1		✔	✔	✔
Suitcase x1		✔	✔	✔

Preparation

Cautions for Product Use

Please check with follow steps carefully every time before flight.

Obey the national laws; do not fly in forbidden areas

Check all parts of Splash Drone are in good condition before flight. Do not fly with aging or broken parts.

Check the propeller and the motor are installed correctly and firmly before flight, making sure the rotation direction of each propeller correct. Do not get close to or even touch the working motors and propellers to avoid serious injury.

Do not over load on the Splash Drone, it should load no more than 1.0Kg.

Make sure the Remote Controller battery and flight battery are fully charged.

Avoid interference between the Remote Control transmitter and other wireless equipments.

Make sure to switch on the Remote Controller first, then power on Splash Drone before take off! After Landing, Power off the Splash Drone first, then switch off the Remote Controller.

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The fast rotating propellers of Splash Drone will cause serious damage and injury. Always fly the Splash Drone 3 meters or above away from you and unsafe conditions, such as obstacles, crowds, high-voltage lines, etc.

Please always keep the compass module away from the magnet. Otherwise it may damage the compass module and lead the Splash Drone to work abnormally or even be out of control.

The built-in ESCs of Splash Drone ONLY supports up to 4S (14.8V) power supply.

ONLY use the SwellPRO original motor and 12-inch propeller.

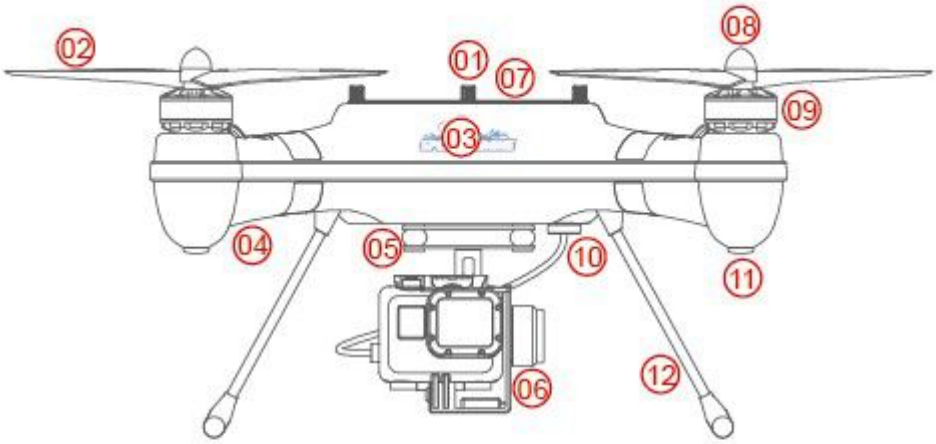
If you want to put the Splash Drone in a car, please keep it away from the speaker, since the compass module may be magnetized.

DO NOT use the magnetic screwdriver to avoid magnetic interference.

If you use your own equipment (for example: GoPro3), please make sure the WiFi function is disabled, to avoid the interference on the transmitter, which may cause the Splash Drone failsafe, crash and even to fly away.

Splash Drone

Splash Drone (with or without gimbal) built-in flight controller which control the entire Splash Drone's functions in flight such as move forwards and backwards, left and right, up and down, control the gimbal turn left or right, up and down and etc.



1、Cover Screw
2、Self-tighten Prop
3、Aircraft Nose
4、LED Flight Indicators
5、Gimbal Damper Ball
6、Waterproof Gimbal
7、Cover
8、Prop Nut
9、Motor
10、Seal Screw
11、Rubber Root
12、Landing Gear

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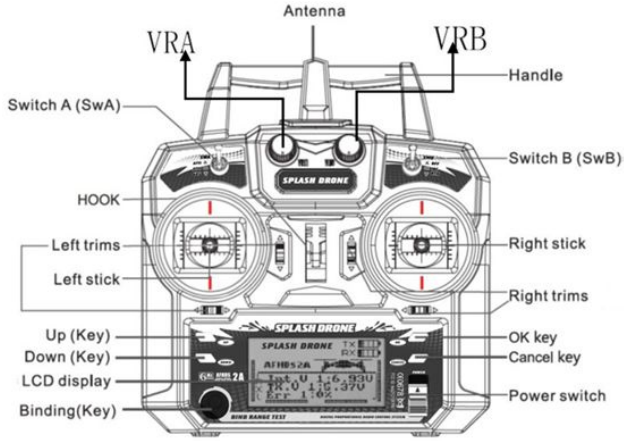
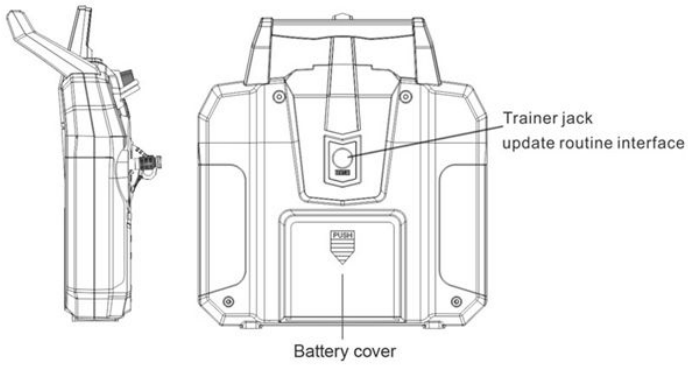
Remote Controller

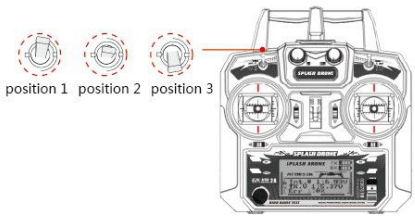
The 2.4GHz radio band has a completely different behavior than previously used lower frequency bands. Aways keep your Splash Drone in sight as any large object can block the RF signal and lead to loss of control and danger. Never grip the transmitter antenna when operating a Splash Drone as this degrades significantly the RF signal quality and strength and may cause loss of control and danger

Remote Controller Operation (Mode 2)

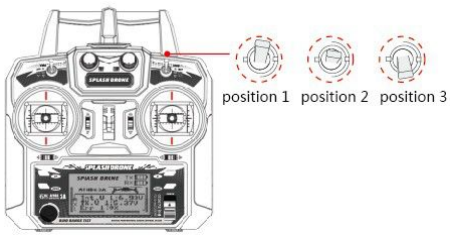




1. Fight Mode

Switch A (SWA), three-position switch. position 1, position 2 and position 3.		
	SWA position 1	ATTI Mode
	SWA position 2	ATTI Mode
	SWA position 3	GPS Mode

2. IOC Mode

Switch B (SWB), three-position switch, position 1, position 2 and position 3.		
	SWB position 1	OFF Mode
	SWB position 2	Cycle Mode (Under GPS Mode)
	SWB position 3	Auto Return Home Mode (Under GPS Mode)

3. VRA, VRB adjust the camera position if install the 2 or 3 Axis Gimbal (Gimbal Horizontal initialization position in middle VRA, and gimbal pitch initialization position should be end of left VRB)

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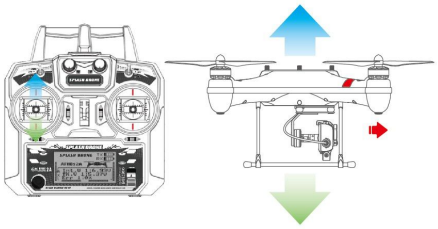
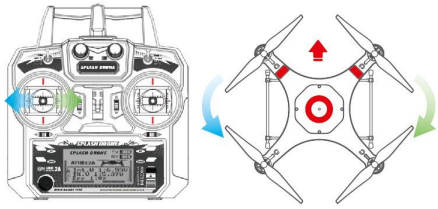
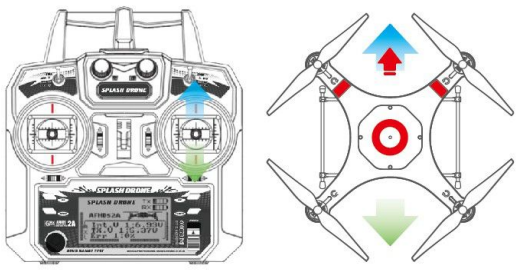
4. Throttle (Left) Joystick push Up and pull Down control the Throttle, yaw stick controls Splash Drone left and right horizontal tilt

The throttle joystick controls Splash Drone elevation.	
	Push the joystick up and the Splash Drone rise.
	Pull the joystick down and the Splash Drone descend.
	If the joysticks are centered under GPS Mode, the Splash Drone will automatically hover and hold the height.
	Push the throttle joystick above the middle position to make the Splash Drone take off. When flying, we suggest that you push the throttle joystick slowly to prevent the Splash Drone from sudden and unexpected elevation changes.

The yaw joystick controls the Splash Drone rudder.	
	Push the joystick left and the Splash Drone rotates counter clock-wise.
	Push the joystick right and the Splash Drone rotates clock-wise. If the joystick in centered, the Splash Drone will remain the same direction.
	The yaw joystick controls the rotating angular velocity of the Splash Drone. Pushing the joystick further away from center results Splash Drone in a faster rotation velocity.

5, The Pitch (Right) Joystick, push Up and pull down control Splash Drone forward and backward tilt, push left and right control Splash Drone horizontal tilt.

The pitch joystick controls Splash Drone forward & backward tilt.	
	Push joystick up and the Splash Drone tilt and fly forward. The Splash Drone will keep level and straight if the joystick is centered.
	Pull joystick down and the Splash Drone tilt and fly backward. The Splash Drone will keep level and straight if the joystick is centered.
	Push or pull the joystick further away from center will result in a larger tilt angle and faster flight velocity.

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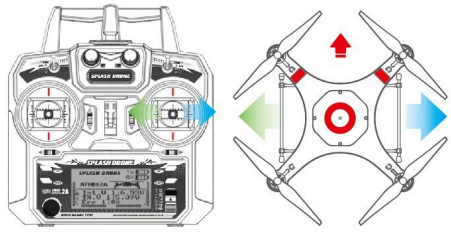
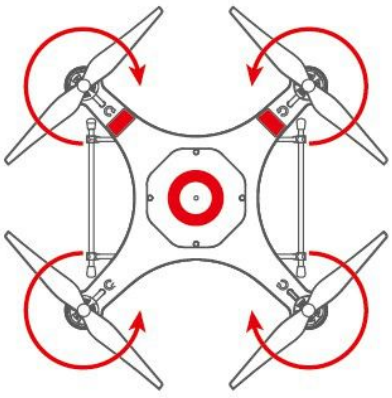
The roll joystick controls the Splash Drone left & right tilt.	
	Push joystick right and the Splash Drone tilt and fly right. The Splash Drone will keep level and straight if the stick is centered.
	Push joystick left and the Splash Drone tilt and fly left. The Splash Drone keeps level and straight if the stick is centered.
	Push joystick further away from center will result in a larger tilt angle and faster flight velocity.

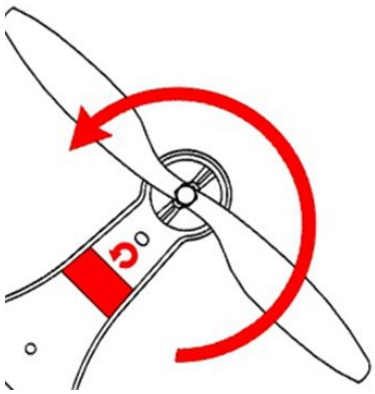
Propeller

1.Mounting the propeller before flight

Preparing 4 original 12-inch propellers, two sliver nut propellers and two black nut propellers. Put Splash drone on a flat level ground, make sure match the **sliver nut propellers** with the correctly marked "**CCW**" motors, and **Black nut propellers** with the motor which mark " **CW** ", ensure tighten all propellers firmly .The arrow's direction stands for the rotating direction of the motors. And install propeller direction is opposite of the motors rotating direction till firm.

Propeller	Sliver Nut (1243R)	Black Nut (1243L)
Image		
Assemble Propeller	Install to the motor which mark on "CCW"	Install to the motor which mark on "CW"





2. Uninstall Propellers

After the motor stop rotating, power off the Splash Drone and put the Splash drone on a flat place. Hold the motor, and screw out the propeller.

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Notice:
Propellers are self-tightening during flight. **DO NOT** use any thread locker on the threads.
Ensure all 4 propellers and motors are installed correctly and firmly before every flight.
Check all propellers are in good condition before flight. DO NOT use any ageing, chipped, or broken propellers.
DO NOT touch the propellers or motors when they are spinning.
Please use original 12-inch propeller, which are classified by the color of each central nut. Replaced Damaged propellers, purchasing new ones if necessary.

Battery

Battery Usage & Cautions

The battery is specially designed for Splash Drone, with 4S 4500mAh capacity, 14.8V voltage and charge-discharge management functionality.

Forbid putting the battery into water, fire or heat place; please keep the battery away from source of water and fire; Please store in a cool and dry environment.

Battery temperature is high immediately after use. Don't start charging until the battery cools down to room temperature;

Do not leave the battery charged unattended. If abnormal charging situation occurs, please stop charging the battery at once; if you cannot attend the battery, remove the battery from the charger in case of unpredictable danger;

Forbid making external force on the battery; do not drop the battery from high places and disassemble or modify the battery;

Please replace the battery with new one if bulges;

If a child accidentally swallows the battery you should immediately seek medical assistance.

Battery should be charged with proper standard charger.

Forbid connecting the battery reversed in positive and negative terminals in the charger or equipment.

Do not connect the battery directly to the wall plugs or vehicle-mounted socket.

Forbid letting the battery terminals (+and-) touch together to cause short-circuit.

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Forbid transport or store the battery together with metal objects.

Do not weld the battery terminals together.

Forbid driving a nail in, hit with a hammer, or stomp on the battery.

Do not disassemble or alter the battery.

Do not use the battery in strong electrostatic areas; otherwise the electronic protection may be damaged which may cause a hazard.

If you get the battery electrolyte leakage into your eyes, don't rub, first wash your eyes with clean water then seek medical assistance immediately. If not handled in a timely manner, eyes could be damaged.

Do not use the battery when it emits an odor, high temperature, deformation, change in color or other abnormal phenomena; if the battery is in use or charging, you should stop charging or using immediately.

If the battery terminal gets dirty, please clean it with a dry cloth before using. Otherwise it will cause a poor contact, thus causing energy loss or inability to charge.

Discarded battery could lead to a fire; you should completely discharge the battery and wrap the output terminal with insulating tape before discarding.

DO NOT drain the battery of Splash Drone or leave the battery plugged into the Splash Drone when unused. When there is low voltage alert please landing timely to avoid damages to the battery or others.

Battery Charging

Charging Procedures
1, Insert the AC power cord into charger (Image I)
2, Insert the AC power cord into 100-240V AC socket, all LED will light for 1 second, then your charger is ready for using (Caution: Always power ON the charger before connecting a battery, or damage to the hanger and the battery can result)
3, Connecting the battery pack to the charger with the XH balance plug (Image I) (Caution: Before charging, ensure you have chosen the correct battery chemistry type for the battery charging)

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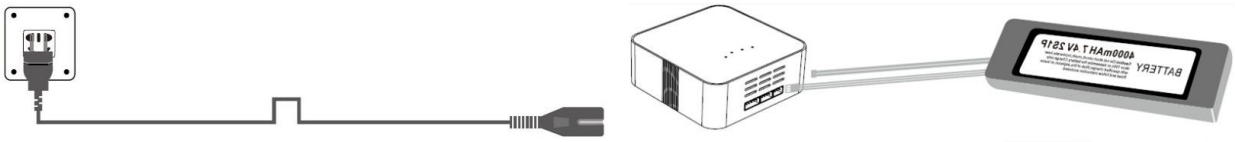
4. The charger starts charging. The four LED will indicate the battery capacity: 1 LED light means battery capacity percentage is 25%, 2 LED lights: 50%, 3 LED lights: 75%, 4 LED lights means battery is fully charged
5. During the charging process, if the 4 LEDs all keep flashing, this is an ERROR

Image I



Calibration

Notice: All calibration switch SWA to the Attitude mode under unlocked state to calibrate.

Splash Drone Calibration Steps:
Joystick Calibration -->> Compass Calibration --->> Horizontal Position Calibration

1. Remote Controller Joystick Calibration

Calibration situation
1. First time use the remote controller.
2. When the joystick in middle position, but the Splash Drone fly sideslip.
3. If remote controller crash occurs.

Joystick Calibration Process	LED Flashing
1. Turn on the remote controller, and power off the Splash Drone	
2. Push the throttle joystick to the top neutral position, Power on the Splash Drone and wait for 5-10 seconds, blue LED intermittent flashing	
3. Pull the throttle joystick to the lowest neutral position, when the blue LED stops flashing, and become normal status, Joystick calibration done.	

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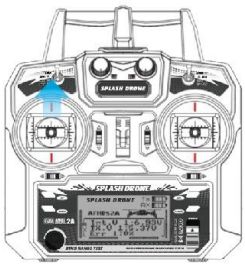	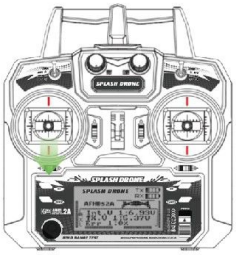
Power off the Splash Drone, push the throttle joystick to the top neutral position	Power on the Splash Drone, pull the throttle joystick to the lowest neutral position till the bule LED flashing

2.Compass Calibration

The GPS module built-in magnetic field sensor for measuring the geomagnetic field, which is not the same in different areas. The GPS module will not work unless the Compass Module has been connected. Make sure the Compass Module connections are correct.

Calibrating the compass before the first flight or when flying in a different area. Make sure to keep away from ferromagnetic substances and other electronic equipment when calibrating or flying. If you keep having calibration failures, it might suggest that there is magnetic interference or other ferromagnetic substance, avoid flying in this area.

Notice: Please always keep the compass module away from magnets. If this situation occurs please change the compass module before flying, otherwise it may damage the compass module and lead the Splash Drone to work abnormally or even be out of control.

Calibration Situation

1. First time use the Splash Drone
2. More than 100 km from the last calibration.
3. Crash occurs
4. If Splash Drone has been to a computer for setting up the parameters.
5. When Splash Drone has shaking, or twitching motions.

Compass Calibration Process	LED Flashing
1. Turn on the Remote Controller and Splash drone, keep the throttle at the lowest neutral position.	
2. Quickly move SWA fully up and fully down a few times (6-10 times) (see switch SWA Image II) till the green LED fast flashing green continuously.	
3. Put the Splash Drone in a horizontal position and continuous rotation in one direction 2 circles (720 degrees), till the green LED slowly flashing. (Image III)	
4. Turn the Splash Drone head down; keep the vehicle vertical and continuous rotation in one direction 2 circles (720 degrees), till the green LED stop flashing, and become normal status (Image IV)	
5. After calibration, must restart the Spalsh Drone	

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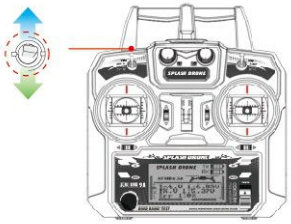
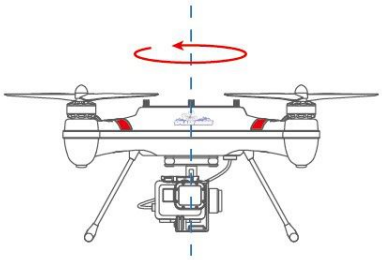
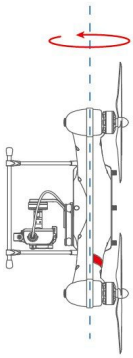
Image II	Image III	Image IV
		
Quickly move SWA fully up and down Green LED fast flashing	Put the Splash Drone in a horizontal position; rotate in one direction 2 circles till the green LED slow flashing.	Turn the Splash Drone head down, rotation in one direction 2 circles till the green LED stops flashing

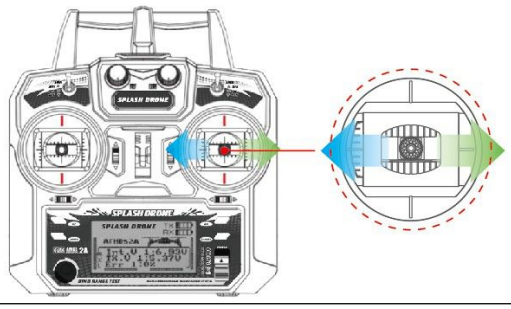
If a cycling phenomenon occurs after correctly installing the electrical compass calibration and GPS installation, please ensure you calibrate the electrical compass again.

3. Splash Drone Horizontal Position Calibration

Calibration situation

1. First time use the Splash Drone, or every time when Splash Drone is not horizontal in the air.
2. In ATT mode and in no wind conditions, Splash Drone fly sideslip.
3. Splash Drone Crash Occurs

Splash Drone Horizontal Position Calibration	LED Flashing
1. Put the Splash Drone on the horizontal ground.	
2. Turn on the remote controller and Splash Drone.	
3. Put the Throttle stick in lowest neutral position.	
3. Quickly left and right move the pitch joystick, till LED become Red, Blue, Green flashing	



Quickly left and right move the pitch joystick, till LED become Red, Blue and Green flashing.

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Flying Mode

	ATTI Mode	GPS Mode
Transmitter Input	Linearity Control	
The Steering Lever	Push lever to middle can keep fuselage horizontal push lever max can keep fuselage in 30° tilt	Push lever to middle to lock position automatically. Push lever in Max can keep 6m/s speed
Position Locked	NO	YES
Lifting Speed	No limited	Max 2m/s
Auto Return Home	NO	Support
Flying Speed	No limited	Max 6m/s

1. Flying mode

Flying mode	
ATTI Mode	Under this mode, Splash Drone control the flight balance automatically, but also lock the flying height when the throttle lever is in the middle. When the stick is pushed forward, the Splash Drone ascends; when the stick pull back the Splash Drone descend. When loss of radio signal occours,the Splash Drone will enter into the Auto Return Home mode automatically ; when the signal is received again,can not control the Splash Drone. If you want to control it again,please switch to GPS mode.
GPS Mode	GPS Mode provides users with simple and easy flying experience, when the steering stick is pushed to the middle, the position of the Splash Drone locked automatically and maintains high-precision hovering. It can perform a stable hover in light wind as it has been designed for effective wind-resistance. In this mode, the lever can control the flying speed accordingly. Max Speed 6m/s speed.
AOC (under GPS mode)	Splash Drone flies to top of the TARGET, switch SWB to middle position to turn on the AOC function. The Splash Drone nose always point towards the TARGET. Push the pitch joystick up, Splash Drone forward direction to enlarge radius. Pull the pitch joystick down, Splash Drone backward direction to reduce radius. Push Roll Stick right, Splash Drone flies right around the TARGET, Push Roll Stick left, the Splash Drone flies left around the TARGET. Notice: This mode will only work providing the radius of your target is greater than 5M.

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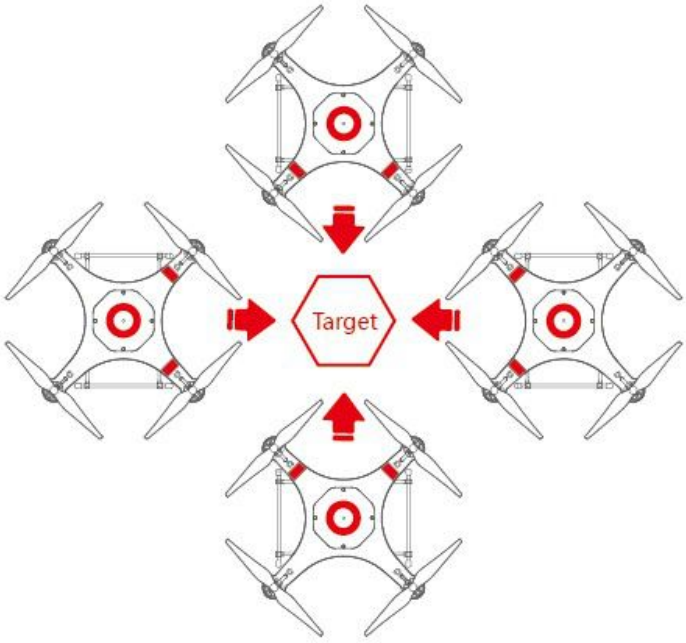
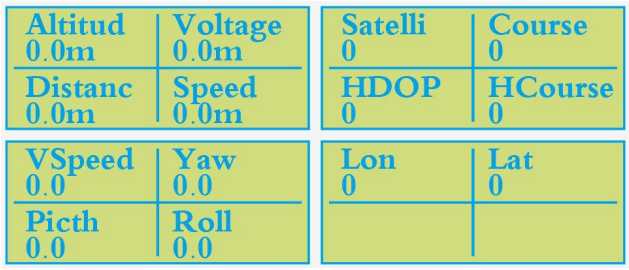
AOC Mode



3. OSD Data on Remote Controller

OSD	
Press up or down the button on remote controller enter the OSD panel. You can find aircraft flying information, include Longitude, altitude, battery voltage, speed, satellite etc. Note: Under GPS mode, the home point will record as soon as you have connected satellite above 6.	

Remote Controller Menu

Menu	Meaning
Altitud	Splash Drone height from the take off place (m).
Voltage	Splash Drone battery voltage (V).
Distanc	Splash Drone distance from the take off place (m).
Speed	Splash Drone fly speed (m/s).
Satelli	The GPS signal strength (from 0-12).
Course	The angle compared to the present position and the original takeoff point (Degree).
HDOP	GPS Horizontal Dilution of Precision.

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HCourse	The current moving angel compared to the original takeoff point (Degree).
VSpeed	Rise or descend speed (m/s), positive number means rise speed, negative number means descend speed.
Yaw	The splash drone nose fly angle.
Pitch	Pitch angle, positive number means forward, Negative number means backward.
Roll	Roll angle, positive number means right fly, negative number means left fly.
Lon	Longitude
Lat	Latitude

Before Flying

1.Safty Guide

Always Follow the Safety Guide
The Splash Drone allows you to fly in rain, lake and ocean. But make sure not in extreme weather. It is irresponsible and dangerous.
Make sure all motors moving direction is in accordance with the operating instructions. If incorrect please adjust the direction.
Landing Drone Process: Power off Splash Drone then turn off the transmitter Take off Drone process: Turn on Transmitter, then turn on Splash Drone
Always remember that the 2.4G RC systems could affect a plane or a car in your vicinity when you power up the transmitter.
When operate in raining or wet environments, make sure no water gets into the Splash Drone body. Should any type of moisture (water or snow) enter the components of the system, erratic operation and loss of control may occur.
Do not operate in the following places: 1. Near other radio controlled activity area 2. In the vicinity of people or public highways. 3. On any water mass where passenger boats may be present. 4. Near high-tension power lines or communication broadcasting antennas as interference could cause loss of control. 5. Improper installation of your Radio Control System in your Splash Drone could result in serious injury.
Do not operate this R/C system when you are tired, not feeling well or under the influence of alcohol or drugs. Impaired judgment may lead to dangerous situations including injuries to yourself or others.
Do not touch the engine, motor, speed controller or any other parts of the Splash Drone that

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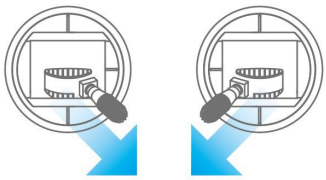
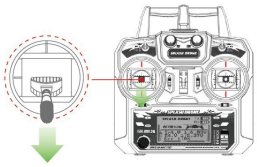
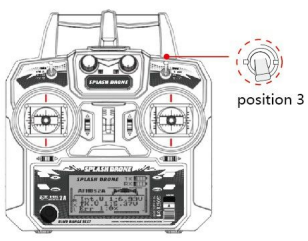
will generate heat while the Splash Drone is operating or immediately after use. Those parts may be very hot and can cause serious burns.
Please make sure thoroughly check Splash Drone all parts working well before every flight. ⚠ Any problems on radio control system or improper installation may cause lose control.

2. Start and launch Splash Drone

Start and launch Splash Drone	
⚠ 1. Place Splash Drone in an open area without buildings or trees, and keep 3-5 meters away from you and others, to avoid accidental injury.	
2. Set all transmitter buttons at original positions	
⚠ 3. Ensure all Splash Drone feature has been checked for serviceability before power on	
4. When power on Splash Drone, it will enter into a self-check test first. Please make sure no movement on Splash Drone in this short period.	
5. LED flight indicator starts flashing as per LED Flashing, means the Splash Drone is initializd and entered the “Ready to Fly” state.	
5. Push both sticks to their lowest neutral position corners as indicated in the diagram on the right side to unlock and start flying the Splash Drone.	

3. Landing

Landing Splash Drone	
1. Push the throttle stick up slowly to lift the Splash Drone off the ground.	
2. Pull down the throttle stick to descend. The stick will lock into place and the Splash Drone will descend steadily	
⚠ 3. After landing the Splash Drone on the ground, keep the throttle stick at its lowest neutral position for 5 seconds, the Splash Drone will stop the motors and lock	
4. Disconnect the Splash Drone battery	
5. Power off the transmitter	

Automatically Return home and landing (GPS Mode)	
Switch SWB to position 3, the flight control system will automatically control the Splash Drone to fly back to the home point (starting place) and landing.	

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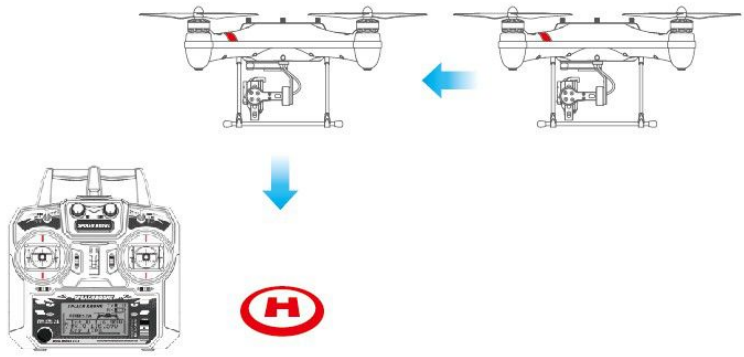
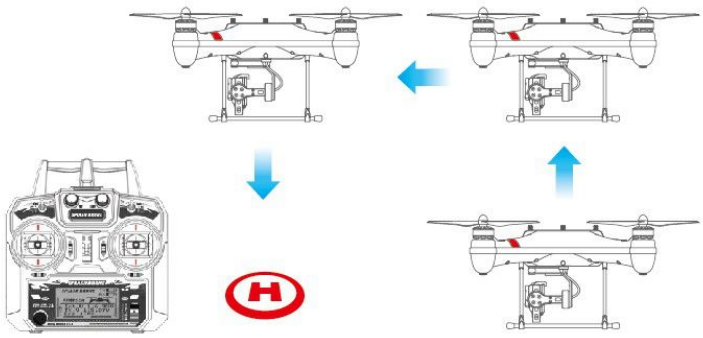
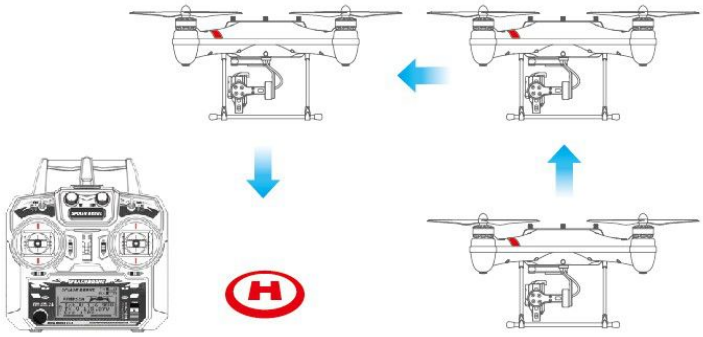
Auto Return Procedure	
Vertical height > 20M Distance > 15M (Original Height Return Home)	
Vertical height < 20M Distance> 15M (Lifting 20 M, then return home)	
Vertical height <10M Distance < 15M (Original Height Return Home)	

Warning: If landing place is not looking accurate, exit Return to Home mode and control Splash Drone land the place where you want.

LED Flight Indicators

The front LEDs are for indicating where the nose of the Splash Drone is. They light up solid red only after the motors have started spinning.

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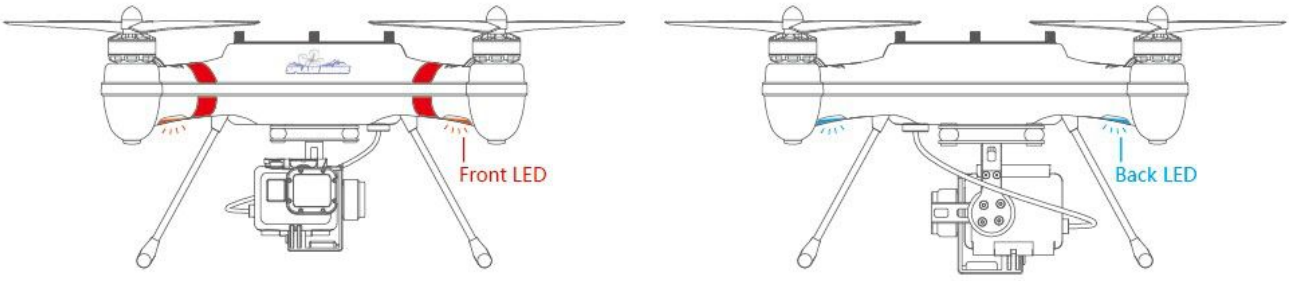


There are Red and Green indicators; Red indicates forward and Green indicates rear;

Low power (lower than 14.4V) both the front and back LEDs flash.

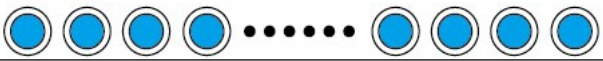
LED Flight controller Indicators

Power on the Splash Drone, the LED flight indicators light up and show the Splash Drone's current status. (There are two indication LEDs on the Splash Drone. One is on the top of the power distribution board; the other one is under the bottom of power distribution board. They both blink at the same time).

Flight Controller LED Status:

Green LED: Working mode
Blue LED : System Status
Red LED : GPS signal strength and low power warning

Flashing order: Green -> Blue -> Red

LED Description (Unlock lowest neutral position Joystick State)	
	ATTI Mode
	GPS Mode
	AOC Mode
	Auto Return Mode
	Height unlocked, Throttle joystick not in middle position
	Unlocked, Pitching & Roll joystick not in middle position (Joystick calibration)
	Throttle joystick not in the lowest neutral position, or splash drone compass abnormal (all 3 calibration)

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Intermittent flashing	
	No GPS Signal
	GPS Signal (5 satellites)
	Normal GPS (6 satellites)
	Good GPS Signal (7 satellites)
No Flashing	Best GPS Signal (>7 satellites)
	Low Power Warning (Level 1 warning)
	Voltage lower than force landing voltage (Level 2 warning) Land Immediately

Low Voltage Warning & Auto Return Flight

Low Voltage Warning		LED Flashing
Level 1 Low Voltage Warning	Low Voltage is preset, to indicate user to start return flight back. When Splash Drone battery voltage lower than the preset voltage (Level 1 voltage warning), the indication LED will blink RED. In this case, should start to fly back to home point, ensuring enough power in the course of return. Also can check current voltage from your remote controller screen.	
Level 2 Low Voltage Warning	The battery voltage lower than the 2nd low voltage warning, Splash Drone will be forced to land. If the landing place is not correct, Switch to ATTI mode control it land to a correct point.	

Low Voltage Auto Landing
When the battery voltage low than the 2nd voltage warning , the Fight control will control aircraft automatically fly back to the home point. If landing place is not correct, please quickly switch to the ATTI mode to control drone lift and landing in correct place. But if you do this may casue the battery overusing can not use

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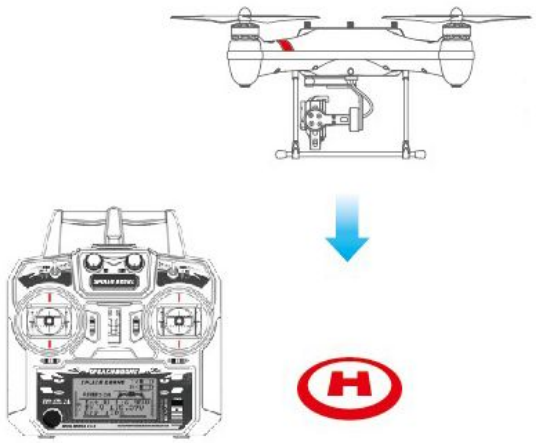
Low Voltage Auto Landing	
Vertical Landing	

Warning: If the battery voltage lower than Auto landing setting voltage, please keep aircraft in 50 meter from you.

Splash Drone & Battery & Transmitter Specification

Splash Drone & Battery & Transmitter Specification		
Splash Drone	Weight (Battery & Propellers Included)	1750Kg
	Hover Accuracy (Ready To Fly)	±0.2 m
	Max Yaw Angular Velocity	30°
	Max Tilt Angle	30°
	Max Ascent / Descent Speed	2 m/s
	Max Flight Speed	GPS & Atitude Mode 6m/s
	Wheel Base Deter meter	450mm
	Flight Time	19 Mins (4500mah)
	Max Take-Off Weight	2.5Kg
	Operating Temperature	10C°to 45C°
	Supported Battery	14.8V 3200mah--5200mah
	Type	Lipo Battery
Battery	Capacity	14.8V 4500mah
	Charging Environment Range	0C°to 40C°
	Charging Time	60minutes
Remote Controller	Weight	390g
	Operating Frequency	2405 to 2475HMZ
	Communication Distance (Open Area)	1.0 KM
	Receiver Sensitivity (1%PER)	-105dbm
	Working Current/Voltage	120 mA
	Battery	1.5V AA*4
	Channels	6 channels

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FAQ:

Splash Drone flight control distance?
Test max flight control distance 1.2 km, transmission distance depends on THE environment.

Splash Drone flies over view, how can we control the drone?
Use one key return home function， Drone will return back automatically（ Make sure No abstacle onthe fight lin. When you can see the drone, you can use exit one return home function to control drone)

Splash Drone motor waterproof?
The Splash Drone motor use special structure waterproof design, make it can overcome rain fly. By the way, if fly in sea water, please use the pure water clean the motor ASAP, avoid the small sand and etc to damage motor.

Splash Drone fly time?
19 minutes fight time with full charge battery, and the fly time depend on the different environment.

Splash Drone remote control support Mode 1?
Yes, support Mode 1, can switch in the remote control menu.

Splash Drone come with follow me feature ?
The RTF and Pro version Spalsh Drone do not support this feature, but Auto version support

Splash Drone Support cycle point feature?
Support

Why after drone landing and throttle joystick in the lowest position, but the motor do not stop working immediately?
Be safe, the drone landing on the groud and throttle joystick in the lowest position, the motor will stop work in 5 seconds and lock

Splash Drone in the aerial video, sport camera shoud close wifi function?
In the aerial video situation, must close the camera wifi fucntion, the wifi signal will effect the remote control.

Splash Drone whether need the screw to fixed?
Splash Drone use self-tighten propeller, just install the propeller install on the correct motor and fixed

Spalsh Drone remote controller push the throttle joy-stick, drone do not fly ?
Be safe, before Splash Drone fly， need break lever to unlock, then push throttle the drone will fly.

Push throttle drone do not fly or turn-over?

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1， Propeller install not correct, check the propeller whether install in the correct motor
2， The large error on Gyro, please connect with software to calibration .

Drifting in fight
1,May large error on Gyro, please connect with software to calibration .
2, No calibration Gyro, re calibration Gyro

Suddenly drop height and red LED flash in fight?
TLow voltage warning, please immediately landing.

Aircraft hard searching satellite signal
1, please check whether in building block around.GPS work outdoors open area.
2, please check any objects placed on the top of Splash Drone

Start remote controller alarm
1, throttle lever not in lowest postion, Pull throttle lever to the lowest point.
2, remote controorl battery no more power, replace the battery

Short flight time
1, Battery not fully charged
2, Flying weight increased
3, Aging battery

Which Channel control Payload Release in remote controller？
Defualt use the 5th or 6th , through SWA or SWB to release

Waterproof gimbal Initialization position is not Horizontal
calibration Gimbal Gyro via software
Software download link:
https://www.dropbox.com/s/1xaixq2y0kkm5vn/Waterproof%20Gimbal%20Gyro%20%20Software.rar?dl=0

Under GPS mode, aircraft hovering appear dithering?
Please re-calibration compass, calibration process check page 18

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